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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,885	05/09/2001	Yasushi Kubota	70904-55845	4328

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EDWARDS & ANGELL, LLP
P.O. BOX 55874
BOSTON, MA 02205

EXAMINER

KOVALICK, VINCENT E

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,885

Applicant(s)

KUBOTA ET AL.

Examiner

Vincent E Kovalick

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 117-121 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 117-121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's Response to Office Action dated March 17, 2004 in response to USPTO Office Action dated December 15, 2003. The amendment to independent claim 1; the addition of new claims 117-121 and Applicant's remarks have been reviewed and entered in the record.

A. Regarding Applicant's argument relative to claims 1 and 8-13, that Kobayashi (USP 5,973,61) does not disclose the limitations teaching "that a part or entirety of either or both of the data signal lines drive circuit and that scan signal line drive circuit is provide in plurality so as to realize mutually different display configurations" and "that at least one of the parts and entireties of the data signal line drive circuit writes image data overlapping an image written by another part or entirety of the data signal line drive circuit" said argument is moot with the amendment to claim 1 and the introduction of new prior art that teaches the said limitations.

Applicant's argument relative to claims 11-13 have been fully considered but they are not persuasive.

- o Regarding claim 11, Taguchi et al. (USP 6,181,317) teaches the limitation of writing image data in a blanking period of each horizontal scan period (col. 19, lines 13-25).
- o Relative to claim 12, Sokawa et al. (USP 6,353,460) teaches the data signal line drive circuit writing a partial image with a predetermined delay from writing another portion of the image data signal (col. 8, lines 13-47).

o Regarding claim 13, Imamura (USP 6,232,949) teaches the placement of drive circuits located opposing one another across a pixel array (Fig. 1, items 5 and 8). This arrangement would provide for each parts and entireties of the drive circuits to write to any portion of the pixel matrix that would facilitate generating an overlapping image.

B. This application contains claim 14-116 drawn to an invention non-elected with traverse in Paper No. 13. A complete reply to the final rejection must include cancellation of non-elected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10, 117-118 and 119-120 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi et al. (USP 5,973,661) taken with Gough et al. (USP 5,638,501). Relative to claims 1 and 117, Kobayashi et al. **teaches** an image display device utilizing a liquid crystal panel (col. 3, lines 6-67 and col. 4, lines 1-5); Kobayashi et al. further **teaches** an image display device (col. 1, line 13 and col. 4, lines 56-57), comprising: a pixel array constituted by a plurality of pixels for displaying an image (col. 1, lines 18-21; col. 4, lines 56-57 and col. 12, lines 27-29); a data signal line drive circuit for supplying a video signal to the pixel array (col. 1, lines 16-18 and col. 4, lines 58-59); a scan signal line drive circuit for

Art Unit: 2673

controlling writing of the video signal to the plurality of pixels (col. 1, lines 16-18 and col. 4, lines 58-61); a timing circuit for supplying a timing signal to the data signal line drive circuit and the scan signal line drive circuit (col. 1, lines 11-16 and col. 4 lines 57); and a video signal processing circuit for supplying the video signal to the data signal line drive circuit (col. 1, lines 11-16, col. 4, lines 58 and 61-64);

Kobayashi et al. **does not teach** a part or entirety of either or both of the data signal line drive circuit and the scan signal line drive circuit is provided in a plurality so as to realize mutually different display configurations.

Kobayashi et al. teaches an image display device utilizing a liquid crystal panel.

Gough et al. **teaches** a method and apparatus for displaying an overlay image (col. 2, lines 13-67 and col. 3, lines 1-33); Gough et al. further **teaches** a part or entirety of either or both of the data signal line drive circuit and the scan signal line drive circuit is provided in a plurality so as to realize mutually different display configurations (col. 2, lines 34-56 and Abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. the feature as taught by Gough et al. in order to provide the driving means to present a variety of display formats including the means to overlap images as befits the user needs.

Regarding claims 2 and 118, Kobayashi et al. **teaches** said image display device wherein only one of the parts and entireties of the drive circuit(s) operates at any given time (col. 5, lines 9-15).

Art Unit: 2673

As to claim 3, Kobayashi et al. **teaches** said image display device wherein: the same part(s) and entirety (ies) of the drive circuit(s) is (are) driven throughout one or more frame periods (col. 1, lines 39-44).

Relative to claim 4, Kobayashi et al. **teaches** said image display device wherein: two or more of the parts and entireties of the drive circuit(s) are switchably driven in one frame period (col. 1, lines 39-44).

Regarding claim 5, Gough et al. **teaches** said image display device wherein: at least two of the parts and entireties of the drive circuit(s) write image data in respective areas on a screen (col. 2, lines 34-53 and Abstract).

As to claim 6, Gough et al. **teaches** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least two of the parts and entireties of the data signal line drive circuit write image data in one partial or whole area on a screen in one frame period (col. 2, lines 34-53).

Relative to claims 7 and 120, Gough et al. **teaches** said image display device wherein: the at least two of the parts and entireties of the data signal line drive circuit operate simultaneously (col. 2, lines 34-53).

Relative to claims 8 and 119 Gough et al. **teaches** said image display device wherein: at least one of the parts and entireties of the data signal line drive circuit writes image data overlapping an image written by another part or entirety of the data signal line drive circuit in one frame period (col. 2, lines 34-53).

Regarding claims 9 and 10, Gough et al. **teaches** the said image display device wherein at least one of the parts and entireties of the data signal line drive circuit writes an image overlapping

Art Unit: 2673

another image throughout one or more entire horizontal scan periods or only in a part of one or more entire horizontal scan periods (col. 2, lines 34-53). It being understood that the overlapped portion of the said image can be generated in only a part of one or more entire horizontal scan periods and the remainder of the scan period would generate a non-overlapped portion of the image.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. taken with Gough et al. as applied to claim 1 in item 3 hereinabove, and further in view of Taguchi et al. (USP 6,181,317).

Relative to claim 11, Kobayashi et al. taken with Gough et al. **does not teach** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least one of the parts and entireties of the data signal line drive circuit writes image data in a blanking period of each horizontal scan period.

Kobayashi et al. taken with Gough et al. teaches an image display device utilizing a liquid crystal panel wherein a part or entirety of either or both of the data signal line drive circuit and the scan signal line drive circuit is provided in plurality for one data signal line so as to realize mutually different display configurations.

Taguchi et al. **teaches** a display and method of and drive circuit for driving the display (col. 1, lines 38-67 and col. 2, lines 1-61); Taguchi et al. further **teaches** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least one of the parts and entireties of the data signal line drive circuit writes image data in a blanking period of each horizontal scan period (col.19, lines 13-25).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. taken with Gough et al. the feature as taught by Taguchi et al. in order to provide a display capable of properly displaying images of various sizes (col. 1, lines 39-40, Taguchi et al.)

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 6 in item 3 hereinabove, and further in view of Sokawa et al. (USP 6,353,460).

Regarding claim 12, Kobayashi et al. **does not teach** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least one of the parts and entireties of the data signal line drive circuit writes image data with a predetermined delay from another part or entirety of the data signal line drive circuit.

Kobayashi et al. teaches an image display device utilizing a liquid crystal panel.

Sokawa et al. **teaches** a video signal processing device (col. 4, lines 37-67 and col. 5, lines 1, 35); Sokawa et al. further **teaches teach** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least one of the parts and entireties of the data signal line drive circuit writes image data with a predetermined delay from another part or entirety of the data signal line drive circuit (col. 8, lines 13-23).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. the feature as taught by Sokawa et al. in order to put in place the means to facilitate receiving a variety of video signals from such diversified sources and in turn displaying the corresponding images.

Art Unit: 2673

6. Claims 13 and 121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claims 1 and 117 respectively in item 3 hereinabove, and further in view of Imamura (USP 6,232,949).

Regarding claims 13 and 121, Kobayashi et al. **does not teach** said image display device wherein the parts and entireties of the drive circuit(s) are located opposing one another across the pixel array.

Kobayashi et al. teaches an image display device utilizing a liquid crystal panel.

Imamura **teaches** a passive matrix LCD with drive circuits at both ends of the scan electrode applying equal amplitude voltage waveforms simultaneously to each end (col. 2, lines 6-41); Imamura further **teaches** said image display device wherein the parts and entireties of the drive circuit(s) are located opposing one another across the pixel array (Fig. 1, items 5 and 8).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. the feature as taught by

Imamura in order to provide an improved flat display device which substantially reduces contrast problems; and further provides a flat display device which applies a voltage to both scanning driving circuits to prevent current from flowing across the liquid crystal (col. 2, lines 24-30, Imamura).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 6,340,959 Inamori

U. S. Patent No. 6,335,778 Kubota et al.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2673

Responses

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E Kovalick whose telephone number is 703 306-3020. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306-0377.



Vincent E. Kovalick

June 1, 2004



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600